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Recons.
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PATENT
S. Spruell

Customer No. 22,852
Attorney Docket No. 02734.0506-00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
Kambiz B. MAKOUl et al.) Group Art Unit: 2854
Application No.: 08/733,072) Examiner: R. Yan
Filed: October 16, 1996)
For: EMBOSsing SYSTEM)
INCLUDING SLEEVED ROLLS)

Commissioner for Patents
Washington, DC 20231

Sir:

REQUEST FOR RECONSIDERATION

In reply to the Final Office Action dated July 3, 2002, the period for reply having been extended for three months by a request for extension and fee payment filed concurrently herewith, Applicant submits the enclosed Request for Continued Examination and requests reconsideration of this application in view of the arguments set forth below.

Currently, claims 1-10, 18-22, 25-30, 33-41, 49-61, 69-72, and 75-77 are pending in the application. Claims 22 and 25-30 have been withdrawn from consideration by the Examiner. In the Final Office Action, the Examiner maintained the previous rejections under 35 U.S.C. § 103(a) of all elected claims 1-10, 18-21, 33-41, 49-61, 69-72, and 75-77. Applicants respectfully traverse the Examiner's rejections.

Claims 1-9, 18, 19, 33-40, 49, 50, 53-60, 69-72, and 75-77 stand rejected under § 103(a) as obvious over U.S. Patent No. 3,731,620 to Klemmer in view of U.S. Patent

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No. 4,685,393 to Saueressig, European Patent Application Publication No. 181,726, and U.S. Patent No. 5,266,257 to Kildune. Claims 20, 21, 51, 52, 71, and 72 have been rejected as obvious over the above references further in view of U.S. Patent No. 4,144,813 to Julian. Finally, claims 10, 41, and 61 are rejected over the above references further in view of U.S. Patent No. 3,404,254 to Jones.

I. Printing and Embossing Are Non-Analogous Arts

In all of the separate rejections set forth above, the Examiner relies on a combination of at least Klemmer with two other references, Saueressig and EP 181,726. Applicants have previously stated, and continue to stress, that while Klemmer is drawn to the embossing art, Saueressig and EP 181,726 are drawn to the printing art. The embossing and printing arts are, for the purposes of this invention, non-analogous because of the different pressures encountered in each process.

In the Final Office Action, the Examiner rejected Applicants' previous arguments out of hand. According to the Examiner, Applicants' arguments are "only self-serving" because "[t]here is no disclosure whatsoever in the present application to indicate that the inventors of the present application are concerned about the greater pressure exist[ing] between the rolls during embossing." Office Action at 5. To the contrary, the specification of the present application makes clear that the pressure involved in embossing is greater than that encountered in printing, and therefore presents different problems. The Examiner's attention is directed to, for example, page 5 of the specification as filed, which reads in part, "with printing processes, the printing roll lightly contacts the sheet being printed and the fibers of the material being printed are preferably not damaged. However, with embossing processes, the embossing

elements press into the material intentionally breaking and working the fiber bonds of the material.”

The Examiner also dismisses Applicants’ non-analogous art arguments by characterizing the “true concern” of the present invention as providing “interchangeable sleeves for the embossing roll so that the embossing pattern may be readily changed for seasonal applications.” Office Action at 5. Applicants object to the Examiner’s characterization of the “true concern” of the present invention, and respectfully submit that this is irrelevant to the present consideration of analogous art. Whatever the “true concern” of the invention is, the fact remains that printing and embossing are non-analogous arts, because of the pressure used in each process. One of skill in the embossing art would recognize that due to the high pressure used in embossing, using a releasably attached sleeve suitable for printing would not necessarily work in embossing, due to problems of vibration and movement.

For these reasons, Applicants maintain their objection to the Examiner’s application of printing art to the present invention. Furthermore, Applicants have provide alternative grounds for overcoming the Examiner’s rejections below. Specifically, Applicants respectfully submit that Klemmer teaches away from the present invention, and further, the combination of Klemmer with either Saueressig or EP 181,726 is improper.

II. Klemmer Further Teaches Away From the Present Invention

As has been noted repeatedly by Applicants, it is not unknown in the embossing art to mount a releasably attached embossing sleeve on a inner core. However, because of the high pressure encountered in embossing processes, a difficulty that

arises is that the sleeve, if not secured to the core, may move or vibrate. Klemmer in fact recognizes this problem, and solves it by securing the sleeve to the core through the use of bolts. See col. 7, lines 46-66. The invention is intended to overcome the "problems of overaction and vibration frequency" which may be caused by the use of air pressure. See col. 2, line 37.

Furthermore, Klemmer actually teaches away from the use of air pressure in embossing processes. "[T]here are inherent drawbacks in the use of such equipment. Air pressure is subject to fast acting speeds and vibrational problems." See col. 2, lines 30-33. Such problems "disturb[] the operation and efficiency of the machine and effect[] the control of the *pressure between the rolls*." See *id.*, lines 38-40 (emphasis added).

Klemmer therefore recognizes the same problem that has been cited by Applicants numerous times - the use of air pressure in embossing processes has long been discouraged by the art, because it is difficult to maintain constant pressure between the rolls without movement or vibration. This is due to the high pressure encountered in embossing processes. Because these pressures are not used in printing, it is not surprising that references such as Saueressig and EP 181,726 disclose that air pressure may be used in a printing process. However, until the present invention, the use of air pressure in embossing processes was not accepted, because of the problems recognized by Klemmer. The present invention overcomes these art-recognized problems by providing a resilient and only slightly expandable sleeve and using air under high pressure to permit the sleeve to be releasably but securely mounted on a core. These advances reduce movement and deformation when the roll

is subjected to the pressures of embossing, and therefore permits use of air pressure in embossing processes.

"[P]roceeding contrary to accepted wisdom in the art is evidence of nonobviousness." MPEP § 2145(X)(D)(3), citing *In re Hedges*, 783 F.2d 1038 (Fed. Cir. 1986). Klemmer indeed shows that the accepted wisdom in the embossing art was that the use of air pressure had inherent drawbacks. Applicants have proceeded contrary to this accepted wisdom to arrive at the present invention, which overcomes the known problems. Applicants therefore submit that the present invention is nonobvious over the Klemmer or any other cited reference.

III. Klemmer Cannot be Combined with Saueressig or EP 181,726

In making the obviousness rejection of the present claims, the Examiner notes that while Klemmer does not teach the use of air pressure, it can be combined with the teachings of Saueressig and EP 181,726 to arrive at the present invention. As Applicants have shown above, however, this is not completely accurate. Klemmer actually teaches away from the use of air pressure - it is not silent on the subject. As such, Applicants respectfully submit that the reference cannot be combined with any reference which teaches the use of air pressure.

"It is improper to combine references where the references teach away from their combination." See MPEP § 2145(X)(D)(2), citing *In re Grasselli*, 713 F.2d 731, 743 (Fed. Cir. 1983). In *Grasselli*, the obviousness rejection was grounded on a combination of a reference which taught the use of alkali metal or antimony in a catalyst, with a reference which taught the use of iron but taught away from the use of antimony. See *id.* The court held that this combination was improper and did not

render obvious a catalyst with both iron and alkali metal, because by excluding antimony, the latter reference discouraged its combination with a reference having antimony. See *id.*

In the present case, just as in *Grasselli*, the Examiner is attempting to combine two references, when one reference teaches away from the combination. One of skill in the art, after reading the disclosure of Klemmer and the problems encountered with the use of air pressure in the embossing art, would not have attempted to combine its teachings with any reference that disclosed the use of air pressure. Rather, one of skill in the art would recognize that Klemmer was in accord with the general knowledge of the embossing art at the time the present invention was made - that air pressure was not an acceptable mounting means for embossing rolls.

One of skill in the art would also find suggestions in Saueressig that air pressure, while suitable for printing processes, would not work in the embossing art. Saueressig provides a sleeve with an inner layer of deformable rubber, which is pushed outward by air pressure when mounting the sleeve. See Saueressig at col. 2, lines 1-7. "Since the inner layer is of low elasticity only and slightly compressible, relative movement between the core and the sleeve *under the pressing forces normally applied in the printing process* cannot occur." *Id.* at col. 2, lines 9-13 (emphasis added). One of skill in the embossing art, knowing that pressures encountered in embossing are typically higher than that in printing, would have believed Saueressig unsuitable for embossing based on this passage, because relative movement would be expected.

Because Klemmer expressly teaches away from a combination with any reference using air pressure, such as Saueressig or EP 181,726, Applicants submit that

a combination of these references shows that the Examiner must be relying on hindsight reasoning as a basis for a motivation to combine. Such reliance is not permissible in an obviousness analysis, as it improperly uses Applicants' disclosure as "a guide through the maze of prior art references, combining the right references in the right way." *Grain Processing Corp. v. American Maize-Prods. Co.*, 840 F.2d 902, 907 (Fed. Cir. 1988). Applicants therefore respectfully submit that the combination of Klemmer with either Saueressig or EP 181,726 is improper. Since each of the § 103(a) rejections in the Final Office Action is based on at least some combination of these references, Applicants respectfully request withdrawal of all pending rejections and allowance of the claims.

III. Conclusion

In sum, Applicants continue to argue that the Examiner's proposed combination of references leading to a conclusion of obviousness is improper, because the references are drawn from nonanalogous art. Additionally, Klemmer in fact teaches away from the present invention, because it recognizes the problems associated with the use of air pressure in embossing.

Because Klemmer teaches away from the present invention, it does far less than render the present invention obvious. In fact, the teaching of Klemmer of the unsuitability of air pressure in embossing practices is actually evidence of the nonobviousness of the present invention. Furthermore, because Klemmer teaches away from the use of air pressure, it also teaches away from a combination of the reference with any other reference which uses air pressure, such as Saueressig or EP 181,726.

In view of the foregoing remarks, Applicants respectfully request the reconsideration and continued examination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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